INEEL Intelligence

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A high-level monthly briefing on operations and activities at the U.S. Department of Energy's Idaho National Engineering and Environmental Laboratory – Home of Science and Engineering Solutions. Work at the lab supports the Department's business lines of environmental quality, energy resources, national security and science.

■ ENERGY RESOURCES – Lab Puts Geothermal Resources on the Map

The INEEL this month released a series of first-of-their-kind geothermal resource maps that show low- to moderate- and high-temperature geothermal energy resource locations in 13 Western states. The maps have also been consolidated into a Western United States geothermal resources map to provide a broader view of regional potential for power and direct-use applications. Geothermal power plants in use are among the cleanest sources of electrical power available and already are having an impact in states such as Hawaii, where 25 percent of the electrical supply comes from geothermal energy. The regional geothermal resource map and the maps for each of the 13 Western states are available on the Internet at http://geothermal.id.doe.gov/maps-software.

■ ENVIRONMENTAL QUALITY – Accelerated Cleanup Work Reduces Risks

Aging water-filled basins at the INEEL's Power Burst Facility, used for years to hold spent nuclear fuel, no longer pose a threat to the Snake River Plain Aquifer. That's because of the successful acceleration of efforts to move the last of the spent nuclear fuel from the facility's underwater storage canal to a new, safe above-ground dry storage facility. Crews completed the work three months ahead of schedule. Separately, environmental risks have also been reduced with the final removal of contaminated soils from the INEEL's Central Facilities Area. The soil, contaminated with low levels of mercury and radionuclides, has been excavated and transported to a new disposal facility that recently started operations. The new disposal facility is part of a cleanup remedy approved by the DOE, Environmental Protection Agency and state of Idaho and will streamline cleanup work by allowing DOE to safely contain and consolidate numerous contaminated soil sites at the INEEL.

■ NATIONAL SECURITY – New Detection Technology Demonstrated

National Security scientists recently demonstrated photonuclear-based nuclear material detection in cargo containers for representatives from the Department of Homeland Security, Department of Defense and other federal agencies. Using a transportable electron accelerator, the scientists were able to detect shielded and unshielded nuclear materials within various cargo container configurations. The detectors used in the array are an INEEL patent-pending design. The demonstration took place at the Idaho Accelerator Center on the Idaho State University campus. The IAC is operated jointly by ISU and the INEEL.

■ SCIENCE – INEEL Helps Bring Science to Life

The wonders of science and technology were brought to life for thousands of Idaho students during the third annual INEEL Science and Engineering Expo in late October. The INEEL teamed up with the American Chemical Society to bring the Expo to the Museum of Idaho and the O.E. Bell Building in Idaho Falls in conjunction with National Chemistry Week. While geared toward students in grades five to nine, the Expo offered a variety of activities and exhibits for learners of all ages. Some 60 demonstrations and interactive exhibits were set up to encourage students to explore science, mathematics, engineering and technology.

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